AMENDMENTS TO THE SPECIFICATION

1. Regarding reference numeral 204: amendment to the last paragraph on page 5 continuing onto page 6 as follows:

--Upon receipt of the AP 215, the UTRAN compares the received AP with the APs received from other UEs. Upon selecting the AP 215, the UTRAN transmits AP_AICH 203 as ACK after a lapse of a time 202. There are several criteria on which the UTRAN bases its comparison of the received APs to select the AP 215. For example, the criteria may correspond to a case where the CPCH, for which the UE has requested the UTRAN through the AP, is available, or a case where the receiving power of the AP received by the UTRAN satisfies the minimum receiving power requested by the UTRAN. The AP_AICH 203 includes a value of the signature constituting the AP 215 selected by the UTRAN. If the signature transmitted by the UE itself is included in the AP_AICH 203 received after transmitting the AP 215, the UE transmits a collision detection preamble (CD_P) 217 after a lapse of a time 214, a time beginning at the time when AP 215 was originally transmitted. A reason for transmitting the CD_P 217 is to prevent a collision between transmission channels from the various UEs. <u>As another reference, time 214 is shown as being equal to time 202 plus a time 204.</u> That is, many UEs belonging to the UTRAN may request the right to use the same CPCH by simultaneously transmitting the same AP to the UTRAN, and as a result, the UEs receiving the same AP_AICH may try to use the same CPCH, thereby causing a collision. Each of the UEs which have simultaneously transmitted the same AP, selects the signature to be used for the CD_P and transmits the CD_P. Upon receipt of the CD_Ps, the UTRAN can select one of the received CD_Ps and respond to the selected CD_P. For example, a criterion for selecting the CD_P can be a receiving power level of the CD_P received from the UTRAN. For the signature constituting the CD_P 217, one of the signatures for the AP can be used, and it can be selected in the same manner as in the RACH. That is, it is possible to randomly select one of the signatures used for the CD_P and transmit the selected signature. Alternatively, only one signature can be used for the CD_P. When there is only one signature used for the CD_P, the UE selects a randomized time point in a specific time period to transmit the CD_P at the selected time point.--

2. Regarding reference numerals 422 and 432: amendment to the last paragraph on page

19 continuing onto page 20 as follows:

--FIG. 4 shows a channel structure the CSICH. Referring to FIG. 4, reference numeral 431 indicates a structure where 32-bit AP_AICH part and 8-bit CSICH part are included in one access slot. A bit is shown for example as a_{30} 432. The access slot, for example access slot AS#1 422, is a reference slot for transmitting and receiving the AP and AP_AICH in the W-CDMA system, and 15 access slots are provided for a 20ms frame as shown by reference numeral 411. Thus, one frame has a length of 20ms and each access slot in the frame has a length of 5120 chips. As stated above, reference numeral 431 indicates a structure where the AP_AICH and the CSICH are transmitted in one access slot. When the AP_AICH part has no data to transmit, the AP_AICH part is not transmitted. The AP_AICH and the CSICH are spread with a specific channelization code by a given multiplier. The specific channelization code is a channelization code designated by the UTRAN, and the AP_AICH and the CSICH use the same channelization code. In this embodiment of the present invention, the spreading factor (SF) of the channelization code is assumed to be 256. The spreading factor means that the OVSF code having a length of spreading factor per symbol is multiplied by the AP_AICH and the CSICH. Meantime, it is possible to transmit different information over the AP_AICH and the CSICH at every access slot, and 120 bits of information (8 bits * 15 slots/frame = 120 bits/frame) on the CSICH are transmitted for every 20ms frame. In the foregoing description, the last 8 unused bits of the AP_AICH are used when transmitting the CPCH channel state information over the CSICH. However, since the CD_ICH is identical to the AP_AICH in structure, it is also possible to transmit the CPCH channel status information to be transmitted over the CSICH through the CD_ICH.--

3. Regarding reference numerals 304 and 334: amendment to the last paragraph on page 49 continuing onto page 50 as follows:

--Upon receipt of the ACK signal over the AP_AICH 303, the UE transmits the CD_P 337 after a time 334 has expired. Time 334 is equal to time 302 plus a time 304. The CD_P has the same structure as that of the AP, and the signature used to construct the CD_P can be selected from the same signature group as the signature group used for the AP. When a signature for the CD_P is used out of the group of the signatures identical to the AP, different scrambling codes are used for the AP and the CD_P in order to distinguish between the AP and the CD_P. The scrambling codes have the

same initial value but may have different start points. Alternatively, the scrambling codes for the AP and the CD_P may have different initial values. The reason for selecting a given signature and transmitting the CD_P is to decrease the probability that the same CD_P may be selected even though there occurs a collision because two or more UEs simultaneously transmit the AP. In the prior art, one CD_P is transmitted at a given transmission time to decrease the probability of an uplink collision between the different UEs. However, in such a method, if another user requests the UTRAN for the right to use the CPCH using the same CD_P before processing a response to the CD_P from one UE, the UTRAN cannot respond to the UE which transmitted the later CD_P. Even if the UTRAN responds to this later UE, there is a probability of an uplink collision with the UE which first transmitted the CD_P.--

4. Regarding reference numeral 306: amendment to the first full paragraph on page 50 as follows:

--In FIG. 3, the UTRAN transmits CD/CA_ICH 305 in response to the CD_P 337 transmitted from the UE, at a time 306 after receipt of CD_P 337. The CD_ICH out of the CD/CA_ICH will be first described. The CD_ICH is a channel for transmitting the ACK signal for the CD_P to the corresponding UE, when the UE transmits the signature used for the CD_P over the downlink. The CD_ICH can be spread using a different orthogonal channelization code from that of the AP_AICH. Therefore, the CD_ICH and the AP_AICH can be transmitted over different physical channels, or can be transmitted over the same physical channel by time dividing one orthogonal channel. In the preferred embodiments of the present invention, the CD_ICH is transmitted over a different physical channel from that of the AP_AICH. That is, the CD_ICH and the AP_AICH are spread with an orthogonal spreading code of length 256 and transmitted over independent physical channels.--

5. Regarding reference numeral 336: amendment to the second full paragraph on page 52 as follows:

In FIG. 3, upon receipt of the CD/CA_ICH 305 transmitted from the UTRAN, the UE examines whether the CD_ICH includes an ACK signal, and analyzes information about the use of the CPCH channel, transmitted over the CA_ICH. Analysis of the two kinds of the above information can be made either sequentially or simultaneously. Receiving the ACK signal

through the CD_ICH out of the received CD/CA_ICH 305 and the channel allocation information through the CA_ICH, the UE assembles the data part 343 and the control part 341 of the CPCH according to the channel information of the CPCH allocated by the UTRAN, as shown in FIG. 3. Further, before transmitting the data part 343 and the control part 341 of the CPCH, the UE transmits the power control preamble (PC_P) 339 to the UTRAN after a lapse of a predetermined time, equal to a time 336 minus a time 306, from a time when the CD/CA_ICH, set before the CPCH setting process, are received.

6. Regarding reference numeral 1721: amendment to the last paragraph on page 73 continuing onto page 74 as follows:

--In operation, a multiplier 1711 receives an output signal of an A/D converter (not shown) and multiplies the received signal by a spreading code W_p for the pilot channel to despread the received signal. A channel estimator 1713 estimates the size and phase of the downlink channel from the despread pilot signal. A multiplier 1717 multiplies the received signal by a Walsh spreading code W_{AICH} for the AICH channel, and an accumulator 1719 accumulates the outputs of the multiplier 1717 for a predetermined symbol period (e.g., 256-chip period) and outputs despread symbols. For demodulation, the despread AICH symbols are multiplied in multiplier 1721 by the output of a complex conjugator 1715, which complex conjugates the output of the channel estimator 1713. The demodulated symbols are provided to a position shifter 1723, which rearranges the input symbols such that the repeated symbols should neighbor to each other. The output of the position shifter 1723 is multiplied by a mask output from a mask generator 1725 by a multiplier 1727 and provided to an FHT converter 1729. Receiving the output of the multiplier 1727, the FHT converter 1729 outputs signal strength of each signature. A control and decision block 1731 receives the output of the FHT converter 1729 and decides the signature having the highest possibility for CA_ICH. In FIG. 17, it is possible to obtain the same results, although the locations of the position shifter 1723, the mask generator 1725 and the multiplier 1727 are interchanged. Further, even if the UE receiver does not rearrange the position of the input symbols using the position shifter 1723, it is also possible to previously appoint the positions at which the symbols are to be transmitted and use the positional information when performing FHT.--

7. Regarding reference numeral 2304: amendment to the second full paragraph on page 100 as follows:

--FIG. 23 shows another method for transmitting the channel allocation confirmation message or channel request confirmation message transmitted from the UE to the UTRAN using the PC_P. In FIG. 23, PC_P 2301, channelization code 2303, PC_P frame 2305 and uplink scrambling code 2307 have the same structure and operation as the PC_P 2101, channelization code 2103, PC_P frame 2105 and uplink scrambling code 2107 of FIG. 21. Further, multipliers 2302 and 2306 also have the same operation as the multipliers 2102 and 2106 of FIG. 21, respectively. To transmit the channel allocation confirmation message or channel request confirmation message to the UTRAN using the PC_P, the PC_P frame 2305 is multiplied <u>in multiplier 2304</u> by the CPCH confirmation message 2309 in a chip unit and then spread with a scrambling code 2307. Here, it is possible to obtain the same result, even though the sequence of multiplying the CPCH confirmation message and the scrambling code by the PC_P frame is reversed. The CPCH confirmation message includes the signature number used in the CA_ICH transmitted from the UTRAN to the UE or the CPCH channel number. Here, the signature number is used for the CPCH confirmation message, when the signatures used for the CA_ICH correspond to the CPCHs on a one-to-one basis, and the CPCH channel number is used for the CPCH confirmation message, when a plurality of signatures correspond to one CPCH. The environments in which the UEs in the UTRAN use the scrambling codes in the method of FIG. 23 are equal to the environments given in the method of FIGS. 22A and 22B.--

8. Regarding reference numeral 2306 recited on page 101, line 3, but not shown in the drawings: amendment to the last paragraph on page 100 continuing onto page 101 as follows:

--FIG. 24A shows another method for transmitting the channel allocation confirmation message or channel request confirmation message from the UE to the UTRAN using the PC_P. In FIG. 24A, PC_P 2401, PC_P frame 2405 and uplink scrambling code 2407 have the same structure and operation as the PC_P 2101, PC_P frame 2105 and uplink scrambling code 2107 of FIG. 21. Further, multipliers 2402 and <u>2406</u> ~~2306~~ also have the same operation as the multipliers 2102 and 2106 of FIG. 21, respectively. To transmit the channel allocation confirmation message or channel request confirmation message to the UTRAN using the PC_P, a channelization code 2403 is

associated with the CA_ICH signature received at the UE from the UTRAN or the CPCH channel number on a one-to-one basis to channel spread the PC_P using the channelization code and transmit the channel-spread PC_P to the UTRAN. The environments in which the UEs in the UTRAN use the scrambling codes in the method of FIG. 24A are equal to the environments given in the method of FIG. 22B.--